Commerce, Justice, Science, and Related Agencies
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Introduction

Good afternoon Chairman Mollohan, Ranking Member Wolf and distinguished members of the committee. It is good to have the opportunity to testify before this committee. I represent the Aerospace Industries Association – we are an association of nearly 300 aerospace manufacturing companies and the 657,000 highly-skilled employees who make the satellites, space sensors, space craft, launch vehicles, and the ground support systems employed by NASA, NOAA, and the DoD. I welcome the opportunity to come before you today to talk about the importance of increasing investments in NASA, NOAA, and NSF to support larger national priorities such as economic recovery, addressing climate change, and the education and competitiveness of our future workforce.

First of all, I'd like to thank the members of this committee for continued support for NASA and NOAA programs and the value Congress puts on science, technology, engineering, and mathematics – or STEM – education.

Your committee has shown the foresight and dedication needed to ensure the U.S. maintains our leadership in space and we are grateful for your recognition of the role our civil space programs play in both our economic strength and national security. The stimulus package was an excellent first step in providing the necessary support our nation's civil space and aeronautics programs need to keep up with the demands of space exploration, aeronautics research and development, Earth observation, scientific research, and critically important manufacturing technology programs.

Importance of Investing in NASA

AIA appreciates the continued support from Congress to keep our nation's Space Exploration Policy on schedule. Supporting this policy is essential to reducing the U.S. human spaceflight gap between retirement of the shuttle and the launch of the Orion-Ares I spacecraft. This impending and unfortunate gap has rendered us dependent on Russia for taking our astronauts to the International Space Station. We cannot afford to cause any undue delay in completing the next generation of spacecraft and NASA must be assured that Congress fully supports its efforts to minimize this gap. And it is important we do take full advantage of our investment in the ISS; which Congress has designated as a National Laboratory. Now nearing the completion of its construction phase, the station will provide a unique environment which we should utilize fully for research.

NASA's Science Directorate provides a better understanding of our Earth, and the universe. The Earth is a complex system on which we all obviously depend, and NASA's research satellites are extremely important to gathering the information we need. NASA looking outward is equally important – we not only live on the Earth, we live in the cosmos and it can affect our lives. Understanding the processes of our sun, such as "solar weather,", or seeing the similarities and differences of other worlds can be critical to understanding our environment.

NASA's Aeronautics Research and Development endeavors are crucial to the completion of the NextGen air transportation modernization program and continued efforts to reduce aviation's environmental impact. The aerospace industry is encouraged with NASA's renewed interest in aeronautics research and development. One area is not only promising, but it hits all our "hot buttons" – environment, energy dependency, and NextGen. It's called Environmentally Responsible Aviation and it looks at vehicle technology, air traffic management operations, and system efficiency to reduce fuel burn.

Other areas in NASA's aeronautics R&D plan that need more funding are development by modeling and simulation of routine Unmanned Aerial Systems access to the national airspace system. This is a most difficult challenge domestically, presenting a vast array of issues that need to be addressed promptly as more government and public agencies want to use these vehicles.

Finally, two others need to be mention for their value and funding requirements: high-fidelity simulation of the National Airspace System and validation and verification of complex systems. These both relate to NextGen and will speed applications so benefits can be realized. Industry stands at the ready to assist

Industry has been concerned with the decline in funding for aeronautics R&D over the last eight years, and the subsequent departure from this critical transitional research. As we continue to work with both NASA and the FAA in modernizing the air transportation system, the support of this Committee will be essential.

Congress has repeatedly demonstrated its support for NASA and its programs and the recently passed 2008 NASA authorization act provides $20.2 billion for FY09. Yet, NASA has faced substantially less funding than has been identified as needed. Under the Consolidated Appropriations Act of 2008, NASA received funding at levels requested for FY2007; FY2007 funding was provided under a continuing resolution based on FY2006 appropriations. The fiscal impacts of nearly two years of zero growth have been felt across the agency, especially as mission responsibilities continue to mount.

The recent stimulus package, as well as the FY09 omnibus appropriations, provided much needed relief to recent funding trends. Given the challenging economic times, we are encouraged, likewise, to see growth in the proposed NASA budget to $18.7 billion for fiscal year 2010. NASA's funding is going in the right direction. What we do not know yet is how this increase would be distributed within NASA. We would urge that the agency maintain a balanced portfolio that supports safely flying out the space shuttle, promoting human and robotic exploration and science, and addresses aeronautics R&D.

That being said, our industry is very concerned that NASA funding is projected to be completely flat from 2011 through 2013, and we are hopeful that funding will increase beyond the president's proposed growth, which does not even account for inflation. What NASA brings to the nation in terms of technology, science, monitoring and understanding our Earth,is extremely critical to ensuring that our nation continues as a world leader. NASA also plays an important role in inspiring our youth to pursue the engineering and science disciplines As our nation carefully examines its priorities, robust investment in NASA will lay the foundation for the future competitiveness and innovative spirit our nation needs.

Investing in NOAA Satellite Programs is Complementary to NASA Missions

Of course, NASA is not the only agency that utilizes space to improve life here on Earth. NOAA has an important operational role in carrying forward NASA's Earth science R&D missions. Funding NASA without funding NOAA is counterproductive.

NOAA maintains constellations of satellites vital to monitoring weather and climate. Thanks to these orbiting sensors, we have the ability to forecast severe weather, a critical service to safeguard our citizens and protect many sectors of our economy. We can measure the impacts of drought and flooding, use predicted weather changes to intelligently manage our power grids, and collect climate data on a global scale not possible with any other systems. Data from NOAA satellites will be increasingly important as we study the impacts of global climate change.

Yet current satellite constellations are aging. It is essential to our nation that NOAA maintains healthy constellations of our nation's operational environmental satellites and has the resources to provide necessary data services and to conduct important related research.

The current budget request submitted by President Obama indicates an investment of "over $1.3 billion to fund the development and acquisition of vital weather satellites and climate sensors." AIA is encouraged by this language and is hopeful that the full budget request takes into account NOAA's growing mission responsibilities. AIA recommends an increase of at least 25 percent in FY2010 to accommodate such responsibilities; recognizing that careful consideration should be made across NOAA's entire budget to ensure future funding matches required mission responsibilities. Given today's current fiscal environment, we understand how difficult such an increase might be. However, the critical nature of these systems necessitates decisive action.

For these reasons we believe it is vital to the well-being of our citizens, our economy, and -- when you consider the social and political impacts of global change to the world -- even our national security that NOAA receive robust growth in its budget over the next several years.

The Role of STEM Education and Industry Workforce Shortages

Another area of importance to our members is our need for a well-trained aerospace workforce. A recent AIA/Aviation Week survey found that almost 60 percent of our workforce is older than 50. Almost 70 percent of our eighth graders are below proficient in math and science, and our 15-year-olds are constantly being outperformed by other nations. As you can imagine, our companies are concerned about their future workforce.

To that end we are very supportive of efforts to improve STEM education. We ask that your committee continue to support, fund, and – where possible – increase funding for the various STEM education initiatives within your agencies of jurisdiction.

The NSF, NOAA, NASA and others all contribute to developing our future workforce, but I have to single out NASA education efforts because of their in-kind support of our industry's very own STEM program, the Team America Rocketry Challenge.

TARC is the world's largest rocket competition for middle and high school students and is an event that is highly enjoyable to attend, so we invite all of you to our competition, and specifically you Congressman Wolf, since TARC's national competition occurs in your own backyard in The Plains, Va.

STEM education and developing our future workforce is a priority for our members, so we look forward to partnering with you in whatever capacity the business community can lend to educating our youth.

Conclusion

Over the past 50 years, space systems and technologies have increasingly become a critical part of our nation's economic, scientific and national security capabilities. Without space systems policymakers cannot make informed decisions about the nation's security and economy and civil financial and communications capabilities are degraded or disrupted. Even our U.S. military forces would have reduced operational effectiveness. Our space capabilities are a source of national pride and an investment in the science and R&D needed to maintain U.S. global leadership. The value of this investment has not been lost on others. Many other nations are employing space to support their infrastructure, to increase their technological prowess, and to demonstrate that they are a modern; or rapidly modernizing. Our leadership is space is no longer assured.

Investments made to NASA, NOAA, and STEM education are investments made to our nation here on Earth. It is essential that funding remains stable and robust to ensure a strong economy, advanced technology growth, and to protect the welfare of our citizens.

Thank you.